

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY


(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 03 MAR 2006

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Applicant's or agent's file reference MM03196/PCT		FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/EP2004/014734		International filing date (day/month/year) 21.12.2004	Priority date (day/month/year) 23.12.2003	
International Patent Classification (IPC) or national classification and IPC A63H17/267, A63H29/00				
Applicant ACCERENZI, VALERIO				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 1-3 sheets, as follows:</p> <p style="margin-left: 40px;"><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand 22.10.2005		Date of completion of this report 02.03.2006		
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer Shmonin, V Telephone No. +49 89 2399-2043		



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Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-14 as originally filed

Claims, Numbers

1-16 filed with the demand

Drawings, Sheets

1/6-6/6 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☒ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☒ the claims, Nos. 17-29
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-16
Inventive step (IS)	Yes: Claims	
	No: Claims	1-16
Industrial applicability (IA)	Yes: Claims	1-16
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

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Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

Reference is made to the following documents:

- D1: US-A-4 802 547 (NAKASAKI ET AL) 7 February 1989 (1989-02-07)
- D2: US-B1-6 620 022 (SMITH JOSEPH JAY ET AL) 16 September 2003 (2003-09-16)
- D3: EP-A-0 377 472 (RUSSELL, JAMES B) 11 July 1990 (1990-07-11)
- D4: US-A-4 008 423 (CHRISTIANSON ET AL) 15 February 1977 (1977-02-15)
- D5: US-A-4 387 325 (KLIMO ET AL) 7 June 1983 (1983-06-07)
- D6: US-A-5 202 617 (NOR ET AL) 13 April 1993 (1993-04-13)
- D7: EP-A-0 424 868 (FUJI JUKOGYO KABUSHIKI KAISHA) 2 May 1991 (1991-05-02)

Claim 1 comprises all the features of claim 11 and is therefore considered as being dependent on the latter (Rule 6.4 PCT).

Claim 11 does not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined. The claim attempts to define the subject-matter in terms of the result to be achieved, which merely amounts to a statement of the underlying problem, without providing the technical features necessary for achieving this result. Further, the expression "*in a manner substantially independently of the load transported by the vehicle, in accordance with a suitable acceleration ramp*" used in claim 11 is vague and unclear and leaves the reader in doubt as to the meaning of the technical features to which it refer, thereby rendering the definition of the subject-matter of said claim unclear, Article 6 PCT.

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of the independent claim 11 is not new in the sense of Article 33(2) PCT.

The document D4 discloses (the references in parentheses applying to this document):

An electronic control system (24) for an electric vehicle which is suitable for being driven by a child driver while playing, said electronic control system (24) being designed to regulate the power supply voltage to the motor (30) and comprising means for regulating

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vehicle acceleration in a manner substantially independently of the load transported by the vehicle, in accordance with a suitable acceleration ramp.

The document D5 discloses (the references in parentheses applying to this document):

An electronic control system (Fig.2,3) for an electric vehicle which is suitable for being driven by a child driver while playing, said electronic control system (17) being designed to regulate the power supply voltage to the motor (B,C) and comprising means for regulating vehicle acceleration in a manner substantially independently of the load transported by the vehicle, in accordance with a suitable acceleration ramp (see also col.6, lines 16-42).

Dependent claims 1-10,12-16 does not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty or inventive step, see documents D1-D7 and the corresponding passages cited in the search report.

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CLAIMS

1. An electric toy vehicle intended for being driven by a child driver while playing comprising: a seat or saddle for the child driver, at least two wheels (14, 15), at least one (14) of which being a driving wheel, an
5 electric motor (11), a speed reducer (13) which transmits movement to said at least one driving wheel (14), a rechargeable power supply battery (12) for powering said electric motor (11) and moving the electric toy vehicle, characterized in that

a) said at least one driving wheel (14) comprises a rim and a tyre fit
10 on said rim, said tyre comprising a rubber carcass and a tread,

b) said electric toy vehicle also comprises an electronic control system (17) which is designed to regulate the power supply voltage to the electric motor (11),

c) said electronic control system (17) also comprises means for
15 regulating vehicle acceleration in a manner substantially independently of the load transported by the vehicle, in accordance with a suitable acceleration ramp.

2. The toy vehicle according to claim 1, wherein said electronic control system (17) also comprises means for regulating the vehicle
20 deceleration in a manner substantially independently of the load transported by the vehicle, in accordance with a suitable deceleration ramp.

3. The toy vehicle according to claim 1 or 2, wherein said electronic control system (17) is programmed so that said electric motor (11)
25 receives predetermined fractions of the maximum voltage which can be supplied by said battery (12).

4. The toy vehicle according to any one of the preceding claims, wherein said electronic control system (17) which is designed to regulate the power supply voltage to the motor (11) comprises a

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potentiometer.

5. The toy vehicle according to any of claims 1 to 4, wherein said electronic control system (17) also comprises short-circuiting means for managing the motor braking function.

5. 6. The toy vehicle according to any of claims 1 to 5, wherein said electronic control system (17) also comprises means for controlling the direct-current flow and preventing current peaks affecting the motor, typically when starting and reversing.

- 10 7. The toy vehicle according to claim 1, wherein said electronic control system (17) also comprises means for electronically disabling the functions of the vehicle during recharging of the power supply battery (12).

- 15 8. The toy vehicle according to claim 1, wherein said rubber carcass comprises two cross plies cross plies, each of said cross plies comprising cords made of nylon.

9. The toy vehicle according to claim 1, wherein said tread comprises blocks and grooves forming a tread pattern providing a coefficient of friction greater than about 0.35.

- 20 10. The toy vehicle according to Claim 1, wherein a thickness of the carcass in sidewall zone ranges between about 1.0 mm and 4.5 mm, more preferably between about 2.0 mm and 3.8 mm, and even more preferably between about 2.5 mm and about 3.3 mm.

- 25 11. An electronic control system (17) for an electric toy vehicle which is intended for being driven by a child driver while playing, said electronic control system (17) being designed to regulate the power supply voltage to the motor (11) and comprising means for regulating vehicle acceleration in a manner substantially independently of the load transported by the vehicle, in accordance with a suitable acceleration

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ramp.

5 12. The electronic control system (17) according to claim 11, wherein it also comprises means for regulating vehicle deceleration in a manner substantially independently of the load transported by the vehicle, in accordance with a suitable deceleration ramp.

13. The electronic control system (17) according to any one of Claims 11 to 12, wherein it also comprises short-circuiting means for managing the motor braking function.

10 14. The electronic control system (17) according to any one of Claims 11 to 13, wherein it also comprises means for controlling the direct-current flow and preventing current peaks affecting the motor, typically when starting and reversing.

15 15. The electronic control system (17) according to any one of Claims 11 to 14, wherein it also comprises means able to disable the functions of the vehicle at predefined overload values.

16. The electronic control system (17) according to any one of Claims 11 to 15, wherein it also comprises means for electronically disabling the functions of the vehicle during recharging of the power supply battery (12).